

Appl. No. 09/944,318
Amendment with Restriction Election and Traversal
Reply to Office action of February 24, 2005

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Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A display device ~~(1)~~ comprising:

a display panel ~~(2)~~ having a first light-transmissive substrate ~~(3)~~ provided with electrodes ~~(6)~~ at the area of pixels arranged in rows and columns, a second light-transmissive substrate ~~(4)~~, and electro-optical material ~~(5)~~ between the two substrates ~~[[,]]~~; and

an illumination system ~~(8)~~ situated on the side of the second substrate remote from the electro-optical material, said illumination system ~~comprising~~ including an optical waveguide ~~(15)~~ of an optically transparent material having an exit face ~~(18)~~ facing the display panel,

~~characterized in that wherein~~ the optical waveguide ~~comprises~~ means is adapted for selectively coupling out light to the display panel for a group of rows of pixels or a group of columns of pixels and ~~is provided with means for coupling in light in a direction which is substantially parallel to the exit face.~~

2. (Currently amended) ~~A display device as claimed in~~ The device of claim 1, ~~characterized in that wherein~~ the illumination system ~~(8)~~ ~~comprises~~ includes at least one backlight ~~(12)~~ and an optical waveguide ~~(15)~~ having at least one entrance face ~~(10)~~ for light, while light from the backlight can be coupled in along the entrance face extending substantially transversely to the exit face ~~(18)~~, and a selectively switchable light switch ~~(24)~~ is situated between the backlight and the entrance face.

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3. (Currently amended) ~~A display device as claimed in~~ The device of claim 2,
~~characterized in that wherein~~ the illumination system ~~comprises~~ includes a backlight
(12) having an entrance face at the area of at least one end face (10) of the optical
waveguide extending substantially transversely to the rows, while light from the
backlight can be coupled in along said end face.

4. (Currently amended) ~~A display device as claimed in~~ The device of claim 2,
~~characterized in that wherein~~ the selectively switchable light switch (21) ~~comprises~~
includes an electro-optical switching device with an electro-optical material (25)
between two substrates (23, 24), at least one substrate being provided with strip-
shaped electrodes (26, 27).

5. (Currently amended) ~~A display device as claimed in~~ The device of claim 1,
~~characterized in that wherein~~ the illumination system ~~comprises~~ includes sub-
segments and at least one backlight (12) with an entrance face for light for each sub-
segment, while light from the backlight can be coupled into the sub-segments.

6. (Currently amended) A picture display device as claimed in claim 5, characterized
~~in that wherein~~ the light from the backlight can be coupled in along an entrance face
extending at an angle to the exit face, and selectively switchable light switches (21)
are situated between the backlight and segments of the optical waveguide.

7. (Currently amended) ~~A display device as claimed in~~ The device of claim 1,
~~characterized in that wherein~~ the selectively switchable light switch ~~comprises~~
includes a switchable reflective mirror.

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8. (Currently amended) ~~A display device as claimed in~~ The device of claim 1,
~~characterized in that wherein~~ the optical waveguide ~~(31) comprises~~ includes an
electro-optical switching device with an electro-optical material ~~(35)~~ between two
substrates ~~(33, 34)~~, at least one substrate being provided with strip-shaped
electrodes ~~(36, 37)~~ on the side of the electro-optical material.

9. (Currently amended) ~~A display device as claimed in~~ The device of claim 1,
~~characterized in that wherein~~ the illumination system ~~comprises~~ includes at least one
backlight having an entrance face for light at the area of the optical waveguide, while
light from the backlight can be coupled in along an entrance face extending
substantially transversely to the exit face, and parts ~~(40)~~ of the backlight are
selectively switchable between an on-state, having a high light intensity, and an off-
state.

10. (Currently amended) ~~A display device as claimed in~~ The device of claim 9,
~~characterized in that wherein~~ the backlight ~~comprises~~ includes a prismatic element
~~(42)~~ at the area of the entrance face.

11. (Currently amended) ~~A display device as claimed in~~ The device of claim 1,
~~characterized in that wherein~~ the display device ~~comprises~~ includes drive unit
capable of means (9) for presenting signals to data and column electrodes for the
purpose of writing pixels, and for selectively activating a part of the illumination
system associated with the group of rows of pixels.

12. (Currently amended) ~~A display device as claimed in~~ The device of claim 11,
~~characterized in that wherein~~ the drive means ~~introduce~~ unit introduces a delay
between the presentation of the signals to the data and column electrodes and the
selective activation of the part of the illumination system associated with the group of
rows or pixels.

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13. (Currently amended) An illumination system ~~(8)~~ comprising an optical waveguide ~~(15)~~ of an optically transparent material having an exit face ~~(18)~~, and means for coupling light on at least one entrance face ~~(10)~~ in a direction parallel to the exit face, characterized in that wherein the optical waveguide is provided with means for selectively coupling in light for a part of the exit face.

14. (Currently amended) ~~An illumination system as claimed in~~ The system of claim 13, characterized in that wherein the illumination system comprises at least one backlight ~~(12)~~ having an entrance face for light at the area of the optical waveguide ~~(15)~~, while light from the backlight can be coupled in along an entrance face ~~(10)~~ extending substantially transversely to the exit face, and a selectively switchable light switch ~~(24)~~ is situated between the backlight ~~(12)~~ and the entrance face.

15. (Currently amended) ~~An illumination system as claimed in~~ The system of claim 14, characterized in that wherein the selectively switchable light switch comprises an electro-optical switching device with an electro-optical material ~~(25)~~ between two substrates (23, 24) which are provided with strip-shaped electrodes (26, 27) on the side of the electro-optical material.

16. (Currently amended) ~~An illumination system as claimed in~~ The system of claim 13, characterized in that wherein the illumination system comprises sub-segments and at least one backlight ~~(12)~~ with an entrance face for light for each sub-segment, while light from the backlight can be coupled into the sub-segments.

17. (Currently amended) ~~An illumination system as claimed in~~ The system of claim 16, characterized in that wherein the light from the backlight can be coupled in along an entrance face extending at an angle to the exit face, and selectively switchable light switches ~~(24)~~ are situated between the backlight and segments of the optical waveguide.

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18. (Currently amended) ~~An illumination system as claimed in~~ The system of claim 13, characterized in that wherein the selectively switchable light switch comprises a switchable reflective mirror.

19. (Currently amended) ~~An illumination system as claimed in~~ The system of claim 13, characterized in that wherein the optical waveguide comprises an electro-optical switching device ~~(31)~~ with an electro-optical material ~~(35)~~ between two substrates (33, 34), at least one substrate being provided with strip-shaped electrodes (36, 37) on the side of the electro-optical material.

20. (Currently amended) ~~An illumination system as claimed in~~ The system of claim 13, characterized in that wherein the illumination system comprises at least one backlight having an entrance face for light at the area of the optical waveguide, while light from the backlight can be coupled in along an entrance face extending substantially transversely to the exit face, and parts ~~(40)~~ of the backlight are selectively switchable between an on-state, having a high light intensity, and an off-state.

21. (Canceled)

22. (New) The device of claim 3, wherein the selectively switchable light switch includes an electro-optical switching device with an electro-optical material between two substrates, at least one substrate being provided with strip-shaped electrodes.